

# **Hampden Road Bridge, Murrumbidgee River, Wagga Wagga, NSW Demolition of Bridge, 20 August 2014**



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## INTRODUCTION

The bridge had been out of service since 2006 due to safety concerns and the owner, Wagga Wagga City Council concluded that demolition of the bridge was the only option available.

The bridge had been opened on 11 November 1895 so had been part of the Wagga Wagga landscape for 118 years at the time of its demolition.

The bridge was marked with an Engineering Heritage Australia Historic Engineering Marker in February 1993.



Hampden Bridge before the demolition in May 2014. *Image: Wagga Wagga City Council web site.*

## COUNCIL PROJECT <sup>1</sup>

In March 2012, Wagga Wagga City Council resolved to demolish Hampden Bridge due to significant deterioration of the timbers, the cost of rehabilitation and ongoing maintenance expenditure.

The Bridge has been an iconic part of Wagga Wagga's visual and historical landscape for 118 years.

Hampden Bridge was officially opened on 11 November 1895 by the New South Wales Minister for Works, J H Young and named in honour of the new Governor of the colony, Sir Henry Robert Brand, 2<sup>nd</sup> Viscount Hampden.

Hampden Bridge was the second of three bridges to have served as a crossing in that location. The third (and currently operational) Wiradjuri Bridge was opened in 1995 downstream of the Hampden Bridge, replacing the Hampden as the vehicular crossing point.

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<sup>1</sup> From the Wagga Wagga City Council web site <http://www.wagga.nsw.gov.au/city-of-wagga-wagga/engineering-services/hampden-bridge/council-reports>.

Hampden Bridge continued to serve as a footbridge and cycleway until it was permanently closed to all public access in August 2006 due to safety concerns.



The remains of the bridge immediately after the demolition. Image: Wagga Wagga City Council web site.

## STATEMENT OF HERITAGE IMPACT, HAMPDEN BRIDGE, MURRIMBIDGEE RIVER, WAGGA WAGGA

Wagga Wagga City Council engaged NGH Heritage, Wagga Wagga to write this report which was completed in May 2013 and formed a basis of future action.

**The Conclusions and Recommendations of this report are as follows:**

“The proposal to demolish the out of commission Hampden Bridge (timber truss) is considered to lead to a significant impact in accordance with the NSW Heritage Act 1977, Environmental Planning and Assessment Act 1979, and the Commonwealth Environment Protection and Biodiversity Conservation Act 1999, in terms of heritage, but this is unfortunately unavoidable owing to the degraded condition of the bridge.

The following recommendations are made for the proposed activity:

- The western (city side) abutment should be retained. This would include the concrete abutment itself, the earth fill behind the abutment, and the stone parapets inclusive of all name and date plaques.
- Wagga Wagga City Council should prepare a management plan detailing how the western abutment would be restored and maintained. The management plan should identify a sustainable funding source for restoring and maintaining the abutment.

- The western abutment should be recommended for listing as a Heritage item on Wagga Wagga City Council's LEP 2010.
- The Heritage Council should be notified of the decision to remove the in-stream piers.
- The two concrete date posts should be retained in situ.
- The Hampden Bridge should be removed as a heritage item from the Wagga Wagga LEP 2010.
- Wagga Wagga City Council should develop a professional interpretative display at the western abutment. The interpretive display should be accessible to the general public, and should contain information and pictures detailing the historical context of the Hampden Bridge. Information from this SoHI and from other published sources into the heritage significance of the site should be used in the interpretive display.
- An archival recording should be prepared for Hampden Bridge. This should follow the guidelines for Items of Local Heritage Significance as outlined in the NSW Heritage Branch publication How to Prepare Archival Records of Heritage Items. The Archival Recording should be made permanently available to the public.
- Demolition of Hampden Bridge should follow the requirements in the RMS Recycling of Used Bridge Timbers policy. All useful parts of the bridges should be salvaged and stockpiled for possible future use, where feasible, and subject to appropriate scientific testing and resulting recommendations.
- In the unlikely event any unexpected archaeological remains are discovered, works must cease in the vicinity and the Wagga Wagga City Council's Heritage Officer be contacted. It is recommended the proposed works at the Hampden Bridge indicated in this SoHI, be approved subject to the above conditions".

The statement that the destruction of the bridge was "unavoidable" (line 5 of the above quote) is unfortunate as this statement is clearly untrue. The bridge could have been repaired and/or reconstructed as demonstrated by the repair and/or reconstruction of other similar bridges elsewhere in New South Wales in recent years. Clearly the Council did not wish to invest in the repair and/or reconstruction of the Hampden Bridge.

## **DEMOLITION METHODOLOGY <sup>2</sup>**

"The current development application outlines a methodology to dismantle the bridge in pieces using heavy machinery located on the river bank and floating work platforms.

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<sup>2</sup> From the Wagga Wagga City Council web site <http://www.wagga.nsw.gov.au/city-of-wagga-wagga/engineering-services/hampden-bridge/demolition>



The Contractor has proposed a change in demolition methodology due to current condition of the bridge and concerns over work on the bridge causing unmanaged collapses of bridge material.

To change demolition methodology, the Contractor must lodge an application for an Amended Development Application.

The application to change demolition methodology will be submitted in the coming week and its review will run concurrently with works onsite.

Initial work being undertaken over the coming months is common to both current and changed methodology, allowing the amendment to be assessed without further delaying the project.

Due to common works involved in site preparation, no unnecessary work is being undertaken, nor is contractor operating outside current conditions of consent.

### **Proposed change of methodology**

‘Induced collapse’ is a common technique for bridge demolition that removes the need for intensive work on unstable structures at height and reduces the possibility of truss failure during manual dismantling.

Induced collapse involves the systematic/sequential removal of key structural members through the application of force to result in the controlled collapse of the structure.

Because the application of force to remove key structural members is done remotely via the use of small charges, this method minimises the need for prolonged work activity by individuals on a deteriorating and dangerous structure.

Additionally, the structure is collapsed to ground level where it can be then dismantled on the ground rather than trying to dismantle them at height.

Any loose timbers or material will be cleaned from the riverbed using a longreach excavator with a sieve bucket.

This will be followed by rehabilitation of the site and then demobilisation of all plant and equipment.

### **Pylon Removal – Amended Application**

Council resolved last year to proceed with the complete demolition of the bridge including the removal of the pylons. This decision was based on the inability to re-use the pylons for new River crossings and the cost of ongoing maintenance of pylons to ensure they were not an ongoing water hazard.

The current approved development application for the project has issued a condition to retain the pylons as part of heritage conservation.

An application for an Amended Development Application will be lodged by the Contractor, requesting the condition of consent requiring the retention of the three pylons be amended to allow for the pylons to be removed as per the resolution of Council.

This application will contain information to support Council's original request to remove the pylons and will be submitted in the coming weeks”.

## OUTCOME

**The bridge was demolished on 20 August 2014 by the use of explosive charges to remove the centre span then by the use of heavy earthmoving equipment on the rivers banks to destabilise and collapse the spans adjacent to the abutments.**

**A video of the demolition and a series of time-lapse still images can be found on the Wagga Wagga city council web site.**

**No list of materials and components recovered from the bridge has been provided on the Council web site.**



**The centre of the span shortly after detonation of charges. Image: Wagga Wagga City Council web site.**



The centre of the span shortly after the span settled in the river. *Image: Wagga Wagga City Council web site.*